

LISTING SHOWING THE AMENDMENT TO THE CLAIMS

This listing replaces all prior listings of claims.

IN THE CLAIMS

Amend the claims as follows.:

1 (Currently amended). An organic capacitor having voltage-controlled capacitance, comprising at least the following functional layers:

- a first electrode (2), a second electrode (5), and
- an insulator layer (4) disposed between the first and second electrodes (2, 5), wherein

characterized by

at least one first semiconductor layer is located (3) provided between the first and second electrodes (2, 5), and wherein

- the concentration of free charge carriers in at least said first semiconductor layer (3) is varied in a controlled manner by application of a voltage (U_{52}) between said first and second electrodes (2, 5),
- the concentration of said charge carriers determining the capacitance of the capacitor, and
- the concentration of said free charge carriers in at least said first semiconductor layer (3) is additionally varied in a controlled manner by a frequency of the applied voltage (U_{52}).

2 (Currently amended). An organic capacitor as defined in claim 1, **characterized in that** wherein the variation of the concentration of said free charge carriers results in a variation of an effective spacing (a) of the electrodes (2, 5) serving as capacitor plates, and said effective spacing (a) functionally determines the capacitance.

3 (Currently amended). An organic capacitor as defined in any one of the previous claims, **characterized in that** claim 2 wherein the variation of the concentration of said free charge carriers results in a variation of an effective plate surface area, and said effective plate surface area functionally determines the capacitance.

4 (Currently amended). An organic capacitor as defined in claim 1 wherein any one of the previous claims, characterized in that at least one of said first and second electrodes (2, 5) is a structured electrode (2', 5').

5 (Currently amended). An organic capacitor as defined in claim 4 wherein any one of the previous claims, characterized in that the at least one of said first and second structured electrodes (2', 5') is embedded in said semiconducting layer (3).

6 (Currently amended). An organic capacitor as defined in claim 1 any one of the previous claims, characterized in that wherein said organic capacitor comprises a second semiconductor layer (6) provided located between said first and second electrodes (2, 5) and disposed on one of the sides of said insulator layer (4) opposite said first semiconductor layer (3), the concentration of said free charge carriers in said second semiconductor layer (6) being varied in a controlled manner by applying a voltage (U_{52}) between said first and second electrodes (2, 5).

7 (Currently amended). An organic capacitor as defined in claim 6, characterized in that wherein said first and second semiconducting layers (3, 5) are of opposed conductance types.

8 (Currently amended). An organic capacitor as defined in claim 6 or claim 7, characterized in that wherein at least one of said first and second electrodes is a structured electrode and the at least one of said first and second structured electrodes (2', 5') is embedded in at least one of said first and second semiconductor layers (3, 6).

9 (Currently amended). An organic capacitor as defined in claim 1 wherein any one of the previous claims, characterized in that at least one of said functional layers is a layer of an organic substance.